

New Species of Stenospermatum (Araceae)
from the Cordillera de Cutucú

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The Cordillera de Cutucú is an isolated fragment of the eastern cordillera of the Andes in Ecuador, separated from adjacent ranges by the deep valleys of the Río Upano and Río Santiago. Its isolated position has contributed to a high level of endemism, and a recent general collection of flowering plants from the Cutucú is proving to include about 15% new species. In the course of identifying the aroids in this collection I have come across two species of Stenospermatum Schott previously undescribed.

Stenospermatum is predominantly Andean, with 19 of its 39 species reported from Ecuador. The plants are sparsely branched epiphytes, usually comprising two or three stems up to 1 m long bearing thickly coriaceous leaves and terminal inflorescences. Evolutionary specialization as true epiphytes is a major feature distinguishing Stenospermatum from the related genera Monstera Adans. and Rhodospatha Poepp., which are vining hemi-epiphytes with terrestrial germination. In Stenospermatum the tiny seeds are dispersed by birds to the branches of trees, and the entire life cycle is passed epiphytically.

The first of the new species here described is secondarily terrestrial, and forms a component of the bizarre vegetation at the summit of the Cutucú. This consists of extensive meadows of bright red sphagnum in which a scattering of angiosperms, principally cyclanths, orchids, and bromeliads, is to be found. However, the dominant angiosperm is Stenospermatum arborescens, a giant (for the genus) herb standing 3 m tall, usually solitary but sometimes forming clumps of half a dozen plants. The weird aspect of these megaphyllous monocaul herbs, seen through a wind-blown fog, is reminiscent of the Espeletia paramos further north, and makes an unforgettable impression.

Stenospermatum arborescens Madison, sp.nov.

Herba terrestris magna arborescens, ad 3 m alta. Caudex teres, viridis, 4-8 cm crassus, internodiis 1.5-3 cm longis. Petiolus 60 cm longus, vagina 10 cm infra laminae basin desinente instructus. Lamina valde coriacea, elliptica, 50-60 cm longa, 20-25 cm lata, base rotundata vel obtusa, apice obtusa. Pedunculus carnosus, teres, 1.5-2 cm crassus, 60-80 cm longus, erectus. Spatha ignota. Spadix 1-1.5 cm stipitatus, cylindricus, albus, 14-18 cm longus, ovariis pluriovulatis.

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TYPE: Ecuador, Prov. Morona-Santiago, Cordillera de Cutucú, along a trail from Logroño to Yaupi in the general region $2^{\circ}46'S \times 78^{\circ}06'W$, summit, elev. 2000 m, Nov. 1976, Madison, Bush & Davis 3589 (Holotype SEL, isotype US)

Stenospermatum arborescens is most closely related to S. crassifolium Engler, an epiphytic species from eastern Peru distinguished by its much slenderer peduncle and shorter stipe, and by the leaf sheath nearly reaching the lamina, rather than ending 10 cm below the lamina base as in S. arborescens.

The second new species of Stenospermatum from the Cutucú is much more typical of the genus, being a diminutive epiphyte inhabiting cloud forest at 1800 m elevation.

Stenospermatum zeacarpium Madison, sp. nov.

Herba terrestris vel epiphytica, ad 0.5 m alta. Caudex viridis, cylindricus, 5-8 mm crassus, internodiis 1-2 cm longis. Petiolus 5-6 cm longus, ad basem laminae late vaginatus; lamina subcoriacea, ovata vel anguste elliptica, base cuneata, apice attenuato, 13-18 cm longa, 4-6 cm lata. Pedunculus gracilis, teres, 1 mm crassus, 10 cm longus; spatha subviridis, globosa, persistens, 5-6 cm longa, ambitu 4-5 cm. Spadix fructifer nutans, 5-6 mm stipitatus, conicus, 5 cm longus, base 1.5 cm crassa, ad apicem angustatus. Baccae 4-5 mm longae, 5-8 seminales; semina claviformi, 3 mm longa.

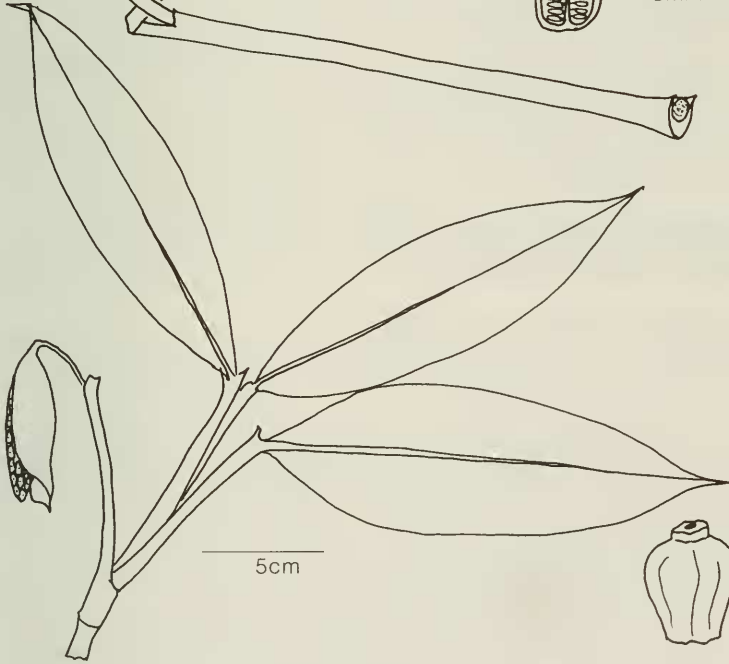
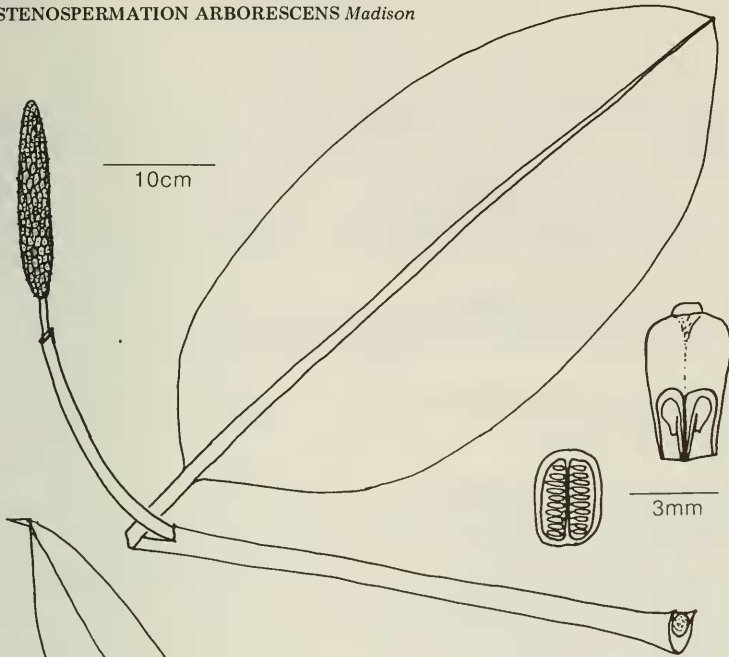
TYPE: Ecuador, Prov. Morona-Santiago, Cordillera de Cutucú, along a trail from Logroño to Yaupi in the general region of $2^{\circ}46'S \times 78^{\circ}06'W$, cloud forest, elev. 1800 m, Nov. 1976, Madison, Bush & Davis 3430 (Holotype SEL, isotype US)

ETYMOLOGY: Latin Zeacarpium, 'Zea-fruited,' referring to the resemblance of the tapered spike of fruits, with its enveloping green bract, to an ear of maize.

The persistence of the short, globose spathe to time of fruit maturity readily distinguishes Stenospermatum zeacarpium from the other species of the genus, in which the spathe is deciduous after anthesis. The strongly tapered conical spadix, 1.5 cm thick at the base narrowing to 0.5 cm at the apex, is also a diagnostic feature. Stenospermatum zeacarpium appears to be most closely related to S. angosturense Engler, which also occurs in the Cutucú, but at lower elevations (1200 m). Stenospermatum angosturense is distinguished from S. zeacarpium by its broader leaves and peduncles only half as long

In addition to the three species already mentioned, Stenospermatum adsimile Sodiro, with distinctive bright yellow fruits, occurs in the Cutucú at elevations of 1700-2000 m.

STENOSPERMATION ARBORESCENS *Madison*



STENOSPERMATION ZEACARPIUM *Madison*